

MAPEPLAN UG

Synthetic waterproofing membrane



DESCRIPTION

Mapeplan UG is a PVC-P synthetic waterproofing membrane.

Mapeplan UG is a single layer colour geomembrane with an orange signal layer. It can be applied as a water barrier in tunnel and underground construction of any type.

WHERE TO USE

- Underground structures waterproofing.
- Drill and blast tunnels waterproofing.
- Open cut and cover tunnels waterproofing.

TECHNICAL CHARACTERISTICS

Mapeplan UG is a special formulation from MAPEI laboratories, to accomplish different waterproofing requirements. The twin colour membrane has a signal layer (orange/black) which allows a visual indication of damage for QC procedures.

Mapeplan UG is manufactured to the highest standards to achieve good mechanical properties and performance characteristics. Some of the characteristics and advantages of using **Mapeplan UG** are:

- long life expectancy and lower life cycle costs;
- high mechanical characteristics;
- signal layer (orange/black);
- double seem welding is possible to allow pressure testing of the joints;
- resistance to permanent water pressure;
- high resistance to root penetration;
- performance at low temperature;
- high resistance to electric currents;
- no degradation when submerged permanently;
- fire reaction classification: Class E according to EN 13501-1;
- loose laid to act independently of the structural movement;
- compartmentation/sectorisation is possible with PVC waterstops;
- environmentally friendly, recyclable.

PACKAGING

Mapeplan UG is supplied in various thickness of 2.0/2.1 m widths and a standard 20 m length. It is possible to supply custom made roll lengths to suit specific needs.

STORAGE AND WASTE DISPOSAL

Mapeplan UG is stable in ordinary storage conditions. It is advised to store the product at the site in its original sealed packaging. According to current norms regarding waste disposal, the product may be disposed of in an authorized waste tip, a recycling plant for plastics or an authorized thermo-reducing plant.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeplan UG is an article and referring to the current regulations (Reg. 1906/2007/CE - REACH) does not require the preparation of the Material Safety Data Sheet. During use it is recommended to wear gloves and goggles and follow the safety requirements of the workplace.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)			
PRODUCT IDENTITY			
Raw material:	PVC-P		
Colour:	orange/black		
	Mapeplan UG 15	Mapeplan UG 20	Mapeplan UG 30
Dimensions:			
Thickness (EN 1894-2) (mm):	1.5 mm (-5/+10%)	2.0 mm (-5/+10%)	3.0 mm (-5/+10%)
Standard roll length (EN 1848-2) (m):	20 (-0/+5%)	20 (-0/+5%)	20 (-0/+5%)
Width (EN 1848-2) (m):	2.00/2.10 (-0.5/+1%)	2.00/2.10 (-0.5/+1%)	2.00/2.10 (-0.5/+1%)
Mass per unit area (EN 1849-2) (g/m ²):	2055 (-5/+10%)	2740 (-5/+10%)	4110 (-5/+10%)
TECHNICAL CHARACTERISTICS			
Tensile strength at break (ISO EN 527) (part 1 and 3, test type 5, speed 100 mm/minute) (MPa):	15 (± 2)	15 (± 2)	15 (± 2)
Elongation at break (ISO EN 527) (part 1 and 3, test type 5, speed 100 mm/minute) (%):	280 (± 10%)	280 (± 10%)	280 (± 10%)
Resistance to tearing (ISO 34) (B method - corner test picture 2, speed 500 mm/m) (kN/m):	≥ 45	≥ 45	≥ 45
Puncture CBR test (EN ISO 12236) (kN):	2.0 (± 0.25)	2.5 (± 0.25)	3.0 (± 0.25)
Water permeability (EN 14150) (m ³ /m ² day):	< 10 ⁻⁷	< 10 ⁻⁷	< 10 ⁻⁷
Cold bending (EN 495/5) (temp. = -25°C):	no break or crack	no break or crack	no break or crack
Microbiological resistance (variation of tensile strength and elongation at break) (EN 12225 - ISO EN 527 - 3/5/100) (%):	≤ 25	≤ 25	≤ 25

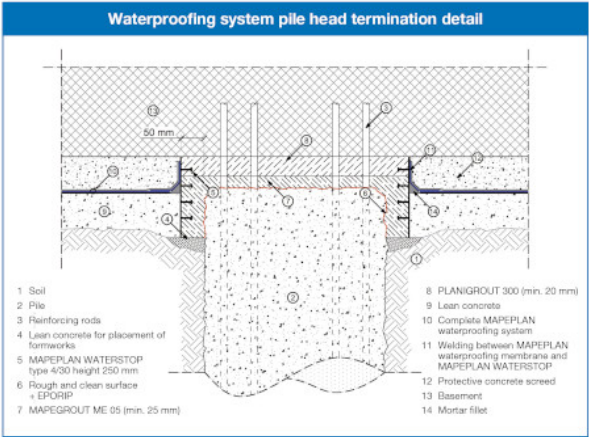
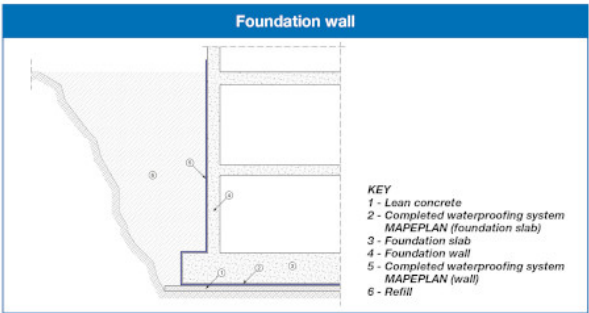
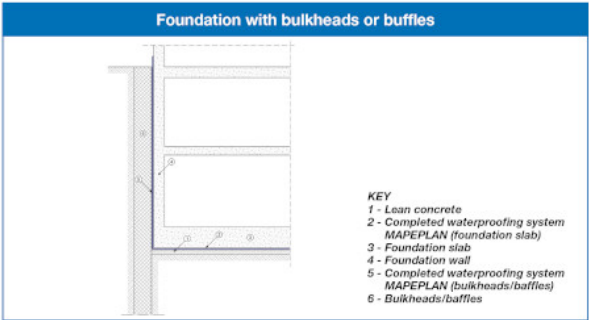
Oxidation resistance (variation of tensile strength and elongation at break) (EN 14575 - ISO EN 527 - 3/5/100) (%):	≤ 25	≤ 25	≤ 25
Root penetration resistance (CEN/TS 14416):	conform	conform	conform
Fire reaction classification (EN 13501-1):	class E	class E	class E

The membrane is also available with embossed studs (**Mapeplan TU ST**) for use in the Vacuum system.

MAPEI provide engineering solutions, to suit the requirements of the structure. Assistance is available from highly qualified personnel at the design and during construction, to ensure high performance of correctly installed systems. Various products and accessories which constitute an engineered solution are manufactured and approved by MAPEI. The following product segments are available in the MAPEI range:

- **Idrostop** and **Resfoam** range of active and passive, joint treatment products and injection resins;
- **Planigrout** range of cementitious and resin grouts;
- **Mapelast** range of fluid applied waterproofing products;
- **Mapegrout** range of repair products;
- **Mapeflex** range of elastomeric sealants;
- **Mapeplan** range of membrane accessories.

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your MAPEI representative



WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com.

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